

Preventing Birth Defects: Folic Acid

- CDC encourages women to take 400 mcg of folic acid every day, starting at least one month before getting pregnant, to help prevent major birth defects of the baby's brain and spine.
- Folic acid is a B vitamin. Our bodies use it to make new cells. Everyone needs folic acid.
- By 1998, folic acid fortification of enriched cereal grains was fully implemented in the U.S., preventing an estimated 1,000 neural tube defects each year.

Understanding Neural Tube Defects

- **Neural tube defects are serious birth defects of the spine and brain, and are a significant cause of infant mortality and childhood morbidity worldwide.**
- **Two of the most common neural tube defects are spina bifida and anencephaly.**
- **In the U.S., 3,000 pregnancies are affected by neural tube defects every year, and Hispanic women have a higher rate of neural tube defect-affected pregnancies than non-Hispanic women.**
- **Globally there are more than 300,000 neural tube defect-affected pregnancies each year.**
- **The total lifetime cost of care for a child born with spina bifida is estimated to be \$560,000.**

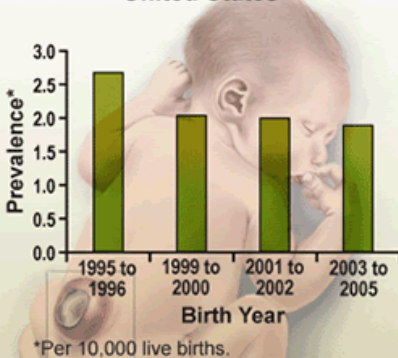


Identifying Prevention Strategies

The Centers for Disease Control and Prevention (CDC) has made a significant contribution in neural tube defects prevention over the past two decades and led the way in establishing that periconceptional use of 400 mcg of folic acid prevents neural tube defects. CDC promotes the use of folic acid among women who can get pregnant.

CDC works with state-based birth defects tracking programs to monitor and detect trends related to the number of babies born with spina bifida and other birth defects in the U.S. Through these systems, we can evaluate the prevalence according to where people live and by other factors. This information can help us evaluate the effectiveness of folic acid promotion efforts, identify risk factors for birth defects, and guide additional prevention opportunities.

Spina Bifida Trends for all Births, United States



Folic acid research activities in CDC's National Birth Defects Prevention Study include assessing:

- Why certain subgroups, like Hispanics, consume less folic acid and have higher rates of neural tube defects; and
- Women's behaviors related to preventing birth defects, including folic acid use and alcohol use.

CDC also uses information from the National Health and Nutrition Examination Study to look at how much folic acid people are getting from the foods they eat and dietary supplements or vitamins they take. The survey also provides information on the actual levels of folate in the blood among individuals including women, children, and people with certain conditions, such as diabetes or obesity.

Preventing Neural Tube Defects in the U.S.

In the U.S., Hispanic women continue to have higher rates of neural tube defects than non-Hispanic white women, and rates are higher among Spanish-speaking Hispanic women than non-Hispanic white women.

Staple foods in Hispanic communities, such as tortillas and other products made from corn masa flour, are not included in the current FDA fortification regulation. Folic acid fortification of corn masa flour would selectively target Mexican American women and have little impact among other groups. CDC is working to reduce ethnic disparities in the occurrence of folic acid-preventable neural tube defects, in part, by working with others for regulatory change allowing folic acid to be added to corn masa flour.



- CDC is conducting research to determine the percent of women of reproductive age meeting the recommended intake of 400 mcg of folic acid daily.
- In Texas, Florida, Illinois and North Carolina, CDC funds projects to apply the Promotora de Salud Model to understand and evaluate the effectiveness of using promotoras (lay health outreach workers) in increasing Latinas' awareness, knowledge and consumption of folic acid.
- CDC is conducting formative research with Hispanic women to gauge the acceptability of folic acid-fortified corn masa flour products to them.

Advancing Neural Tube Defect Prevention Globally

Building on the success of preventing neural tube defects through folic acid fortification in the U.S., CDC is working to strengthen and expand the reach of global folic acid fortification to prevent infant death and childhood disability.

- There are more than 300,000 neural tube defect-affected pregnancies worldwide each year.
- Expanding the reach of global folic acid fortification in developed and developing countries can prevent the majority of these neural tube defects.
- Folic acid fortification can also prevent neonatal deaths.



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